

# DISTRIBUTIONAL AND NOMENCLATURAL NOTES ON THE FLORA OF THE TEXAS COASTAL BEND

STEVEN R. HILL

*Department of Botany, University of Maryland,  
College Park, MD 20742*

The Texas coastal bend region has been narrowly defined by Jones (1977) as that area within a radius of 30–60 miles of Corpus Christi. Included in this region are portions of the vegetation areas of Texas (Gould, 1962) known as the Gulf Prairies and Marshes, the South Texas Plains, and outliers of the Post Oak Savannah. Because the region as defined by Jones includes these three diverse floral provinces, the vegetation is likewise very diverse in this small area. Habitats include the coastal salt marshes and dunes, prairies, river bottoms, semi-xeric limestone (caliche) hills, fresh ponds and marshes, and disturbed sites. Jones (1977) has provided an interesting account of floristic changes since settlement by Europeans.

Floristically, the region is interesting in that it is geologically recent and its diversity is due to migration and establishment of species from the south, west, and north. Within the area are populations that originated in warmer climates to the south and reached their northern range limits here, as well as species that have migrated from the east Texas forests and reach their southwestern limits. There are also species that have reached the area from the Edwards Plateau to the west, but most of the taxa have arrived from the prairies from the north due to the similar edaphic factors of the coastal prairies. Since the region is heavily utilized for ranching, agriculture, and minerals, the extensive disturbance that has resulted has allowed invader species or 'weeds' to become well-established. Probably the most remarkable feature of the flora of the region is its similarity to that of the Paraná basin of South America. Dozens of species are disjuncts from that region, and the most reasonable explanation is that of seed transport by birds since the area is on the west branch of the Mississippi flyway from South America. This relationship of the floras has been reviewed by Hill (1982). Chance species introductions by birds from the Caribbean seems also to have occurred as evidence by the presence of *Hibiscus cubensis* A. Rich., a Cuban species known from a single large bayou in Calhoun County near the coast.

Jones (1977) has treated the vascular flora of the region with the exception of the grasses which were treated by Gould and Box (1965) and later in the treatment of Texas grasses by Gould (1975). A supplement to Jones' book was presented by Hill (1981) who included plants from areas slightly



to the north and east of Jones' *Flora* as well. This area will be included in Jones' newest edition of the *Flora* to be published soon (Jones, pers. comm.). A total of 96 new records were added to the region bringing the total to 1417 (Jones, 1977, p. xxi). This paper adds 32 more taxa to the list as well as presenting distributional notes intended to be of assistance to anyone working in this region. Acronyms for herbaria where specimens are deposited follow the format in Hill (1981); all of the vouchers were collected by the author.

PLANTS NEW TO THE TEXAS COASTAL BEND

CUPRESSACEAE: JUNIPERUS VIRGINIANA L. is not indigenous to this region, but has become established at old house sites where it remains scarce and does not seem to be spreading. Refugio Co.: ridge S of Sous Creek, E side of Rte. 77 ca 6 mi S of Woodsboro, 8526 (oc, rk).

POACEAE: ALOPECURUS CAROLINIANUS Walt. was included in Gould & Box (1965) but no specimens had been seen. It is actually occasional to frequent in shortgrass areas particularly near harvester ant nests. Refugio Co.: Greta Ranch, SE side Rte. 77, 8 mi NE of Refugio, 8251 (gol, MARY, NY, oc, rk, TAES, vic, VT); pasture, E side FM 2678 near Rte. 774, Refugio, 4655 (CHAPA); San Patricio Co.: 1.5 mi E of St. Paul, 4677 (CHAPA, gol. oc. vic).

AXONOPUS AFFINIS Chase was also included in Gould & Box (1965) but without a definite record for the region. The species is wide-ranging and is also known in the Paraná basin of South America. In our region it is local on sandy ridges and terraces near creeks and prairie lakes. Refugio Co.: W terrace of St. Nicholas Lake, Greta Ranch, ca. 8 mi NE of Refugio, 6045 (gol, oc, vic); sand ridge at S side Willow Lake, Greta Ranch, 10546 (gol, MARY, MO, oc, TAES, vic, VT).

BRIZA MINOR L. is an introduced European species very scarce in our region. It was not included in Gould & Box (1965) but was reported from eastern Gulf prairies by Gould (1975). Refugio Co.: disturbed pasture, W side FM 2678 3.8 mi N of Mission River, Refugio, 5113 (oc).

BROMUS SECALINUS L. is another Old World introduction not reported by Gould & Box (1965), but reported from the eastern Gulf prairies by Gould (1975). It is very scarce in our area. Goliad Co.: roadside, Rte. 183/77A near Little Sarco Creek crossing, 8629 (gol, MARY, MO, NY, oc, rk, TAES, vic, VT).

DIGITARIA VILLOSA (Walt.) Pers was not reported by Gould & Box (1965) but was reported for the Gulf prairies by Gould (1975). It has been considered a variety of *D. filiformis* by some authors. Victoria Co.: sandy terrace S of Coletto Creek, 2 mi W of Rte. 77, 6360 (oc, vic).

ECHINOCHLOA WALTERI (Pursh) Heller was included in Gould & Box (1965) but no definite records were known. It was reported for the eastern Gulf prairies by Gould (1975). In our region it is scarce and restricted to



river banks. Goliad Co.: banks of San Antonio River ca 7 mi SE of Goliad, River Ranch, 6266 (gol, oc, vic).

*ERAGROSTIS HIRSUTA* (Michx.) Nees is a post-oak savannah species not reported by Gould & Box (1965) nor for our area by Gould (1975). Goliad Co.: sandy pasture at mission ruins, Rte. 59 near San Antonio River crossing, 5499 (oc, TAES).

*ERAGROSTIS TRICHODES* (Nutt) Wood. is another post-oak savannah species that also occurs in the south Texas plains and pine woods, but was not reported by Gould & Box (1965) nor Gould (1975) for our region. Goliad Co.: McNamara Ranch road near power line just W of Rte. 239, ca 2.8 mi SW of Goliad, 6471 (gol, oc, vic); Refugio Co.: Rooke Ranch, sandy terrace at Recinda bend of Aransas River, 7820 (gol, oc, rk, vic, VT).

*MELICA NITENS* (Scribn.) Nutt. is an Edwards Plateau disjunct not recorded for our region by Gould & Box (1965) nor Gould (1975). It is scarce at one locality. Refugio Co.: shaded bottomland along Medio Creek, East Rogers Pasture 4 mi N of Woodsboro, 6911 (MARY, rk, TAES).

*PANICUM TENERUM* Beyr. is very scarce in Texas, and was not reported from our region by Gould & Box (1965). Gould (1975) reported the species from Hardin Co. only. The present record (det. verified by Gould) is a significant disjunction. Refugio Co.: disturbed pasture 3.8 mi N of Mission River at W side of FM 2678, 5115 (oc, TAES, vic).

*PHALARIS ANGUSTA* Nees ex Trin. is another species with a disjunct population in the Paraná basin of South America. Gould & Box (1965) did not report the species for our region but Gould (1975) reported it from the Gulf prairies under the epithet '*angustata*'. It is occasional in swales. Victoria Co.: Coletto Creek area along Fleming Prairie Rd 1.9 mi SW of Rte. 77, 8289 (gol, MARY, MO, oc, rk, vic, VT).

*SETARIA GLAUCA* (L.) Beauv. is an Old World plant not included in Gould & Box (1965) but said to be occasional throughout except in the south Texas plains by Gould (1975). Refugio Co.: weed in sorghum field, N side Aransas River, Rooke Ranch, 7154 (oc, rk, vic).

*SPOROBOLUS VAGINAEFLORUS* (Torr. ex Gray) Wood. was not included in Gould & Box (1965) nor listed for our region by Gould (1975). It is locally frequent in disturbed sandy clays. Goliad Co.: McNamara Ranch road near Rte. 239, ca 2.8 mi SW of Goliad, 6315 (gol, MARY, oc, TAES, vic, VT); Refugio Co.: East Rogers pasture N side Kelly Rd 4 mi N of Woodsboro, 8038 (CHAPA, CTES, gol, LG, MARY, NY, oc, OSU, rk, TAES, vic).

CYPERACEAE: *BULBOSTYLIS CILIATIFOLIA* (Ell.) Fern var. *COARCTATA* (Ell.) Kral has been reported for our region (Kral, 1971; p. 215).

*BULBOSTYLIS JUNCOIDES* (Vahl) Kükenth. var. *AMPLICEPS* Kükenth. Kral (1971, map p. 213) showed a record of this variety probably in Kleberg Co. but a reference to the site was lacking in the text and in Correll & Johnston



(1970). If it truly occurs in our area it would be a significant disjunction from west Texas.

*FIMBRISTYLIS DECIPIENS* Kral was reported from the Matagorda/Jackson Co. area where it is a rice field weed introduced from Louisiana (Kral, 1971; p. 219). It should be expected in our region since rice cultivation is increasing, particularly in Victoria County.

*FIMBRISTYLIS MILIACEA* (L.) Vahl has also been reported as a rice field weed in the Matagorda/Jackson Co. area (Kral, 1971; p. 217) and is to be expected in the coastal bend.

*FUIRENA BREVISETA* (Coville) Coville, according to Kral (1978), is known from the coastal bend, particularly San Patricio and Nueces Co.

*FUIRENA LONGA* Chapm. has been reported from our region in Aransas Co. (Kral, 1978).

*FUIRENA PUMILA* (Torr.) Spreng. has been reported from the Aransas/Refugio Co. area, (Kral, 1978).

COMMELINACEAE: *COMMELINA ERECTA* var. *ERECTA* is less frequent than var. *angustifolia*, but is also present in disturbed sandy soils. Refugio Co.: sand terrace between McGuill Lake and Mission River S of Refugio, 6396 (oc); N side Aransas River, Rooke Ranch near headquarters, 7298 (rk); junction of Medio and Blanco Creeks ca 4.5 mi N of Woodsboro, 7762 (rk); San Patricio Co.: S terrace of Aransas River ca 5 mi E of St. Paul, O'Connor Ranch, 6344 (gol, vic).

CANNACEAE: *CANNA ORCHIOIDES* Bailey is similar to the frequently escaped and persistent *C. indica* reported by Jones (1977) but differs in its yellow and orange, not red, flowers. It persists at old house sites. Refugio Co.: Greta Ranch, Jones Pasture, Rte. 77 ca 8 mi NE of Refugio, 10677 (gol, NY, oc, TAES, vic, VT).

URTICACEAE: *BOEHMERIA NIVEA* (L.) Gaud. is introduced but often appears native. Victoria Co.: Coletto Creek bottoms 2 mi W of Rte. 77, 6368 (gol, oc, vic).

ROSACEAE: *PRUNUS ANGUSTIFOLIA* Marsh. The Chickasaw plum is introduced in our region, but may be established in some areas. Goliad Co.: River Ranch headquarters, ca 7 mi SE of Goliad E of Rte. 239, 6593 (gol, oc, vic).

FABACEAE: *AMORPHA FRUTICOSA* L. is locally common at this one locality in our region. Refugio Co.: banks of Guadalupe River at Rte. 35 NE of Tivoli, 10556 (GH, gol, MO, NY, oc, TAES, vic, VT).

EUPHORBIACEAE: *CAPERONIA PALUSTRIS* (L.) St.-Hil. is a rice field weed whose spread was documented by Correll & Johnston (1970) who reported it from Harris, Jefferson, and Matagorda Co. This report is a significant disjunction to the west. Refugio Co.: disturbed pasture in oil field, House Pasture, Greta Ranch, E side Rte. 77 ca 8 mi NE of Refugio, 10682 (GH, gol, MARY, MO, NY, oc, TAES, vic, VT).

MALVACEAE: *GOSSYPIUM HIRSUTUM* L., cotton, is a well-known crop in



our region that should be added to our flora as an occasional waif along roads and edges of old fields. Refugio Co.: cultivated at Rooke Ranch, Woodsboro, 7394 (oc, rk).

APOCYNACEAE: CATHARANTHUS ROSEUS (L.) D. Don. The Madagascar periwinkle, a common garden ornamental, persists occasionally at old house sites. Refugio Co.: Jones Pasture, Greta Ranch, E side Rte. 77 ca 8 mi of Refugio, 10675 (MARY).

LAMIACEAE: HEDEOMA REVERCHONII Gray var. SERPYLLIFOLIUM (Small) Irving, once considered a variety of *H. drummondii*, has been reported for our area by Irving (1980).

ASTERACEAE: BIDENS BIPINNATA L., while widespread in the SE U.S. was considered infrequent in Texas (Correll & Johnson, 1970). This record is the first report for the genus in our region. Refugio Co.: near old house site, Jones Pasture, Greta Ranch, E side Rte. 77 ca 8 mi NE of Refugio, 10671 (GH, gol, MO, NY, oc, TAES, vic, VT).

#### ADDITIONAL NOTES

The information here concerns aspects of the distribution and nomenclature of taxa already included for the region by Jones (1977, noted simply as 'Jones' in this portion of the text) and also by Correll and Johnston (1970, noted as 'C&J' in this portion of the text). Since most of the vouchers are held in private ranch herbaria (see Hill, 1981) they are cited to make this information more readily available to the botanical community. Eleven of the taxa included are Texas endemics scarce both in our region and in the state in general. Unless otherwise noted, the following are new county records for the coastal bend.

Two habitats in particular have provided significant numbers of new records. The first of these includes several creek terraces with deep sands in Goliad and Refugio Co. that appear to hold vestiges of a former interior dune flora. Twenty-three of the species discussed here are inland dunes 'disjuncts'. Another group of 22 species reach their eastern limits of range on the caliche hills near the San Antonio River in Goliad Co., a habitat most unusual so far east.

EQUISETACEAE: EQUISETUM HIEMALE var. AFFINE (Engelm.) A. A. Eaton is also local along the Mission River in Refugio Co. ca 2 mi S of Refugio, 6412 (gol, oc, vic, VT) and upstream at Medio Creek ca 4.5 mi N of Woodsboro, 7197 (rk).

MARSILEACEAE: MARSILEA MEXICANA A. Br. was previously known in Texas only from Aransas Co. (Jones, C&J). It also occurs in Refugio Co.: prairie ponds S of Willow Lake, Greta Ranch, ca 8 mi NE of Refugio, 10504 (GH, gol, MARY, MO, NY, oc, TAES, vic, VT).

ALISMATACEAE: ECHINODORUS PARVULUS Engelm. is occasionally found inland at the sandy margin of prairie lakes in Refugio Co.: 1.8 mi N of Woodsboro, Barn Pasture, Rooke Ranch, 7753 (gol, oc, rk, vic).



POACEAE: *WILLKOMMIA TEXANA* Hitchc. is a rare grass found in the Texas coastal bend and again in the Paraná basin of northern Argentina. Gould (1975) reported it from Kleberg and San Patricio Co. It also is locally common in shortgrass alkaline prairies in Refugio Co.: W side FM 2678 1.5 mi N of Mission River crossing, 6230 (oc); Greta Ranch, 1.5 mi S of Willow Lake ca 8 mi NE of Refugio, 10500 (GH, gol, MARY, MO, NY, oc, TAES, vic, VT).

CYPERACEAE: *CAREX PLANOSTACHYS* Kunze is also in Goliad Co.: caliche hill 1.8 mi SW of San Antonio River, Rte. 59, 4617 (gol, oc, vic); and in Refugio Co.: bushy slope, East Rogers pasture, Rooke Ranch ca 4 mi N of Woodsboro, 6914 (rk, VT).

*CYPERUS OXYLEPIS* Nees ex Steud. was reported as infrequent in Aransas and San Patricio cos. by Jones and was also reported from Karnes, Nueces, and Refugio Co. by C&J. It has become more frequent on brackish flats due to salty oil field effluent. Refugio Co.: Packery Flats, Mission River at FM 2678, 5932 (oc, vic); margin of salt pond in oil field, East Rogers pasture, Rooke Ranch, 4 mi N of Woodsboro, 8058 (rk); salty effluent, Greta oil field, SE side Rte. 77, 8.1 mi NE of Refugio, 10475 (GH, gol, NY, oc, TAES, vic, VT).

*FUIRENA SIMPLEX* Vahl was reported from Aransas Co. and Padre Island by Jones. It also occurs inland in Goliad Co.: near Martinez Creek, just NW of McNamara ranchhouse, 2.8 mi SW of Goliad, 5564 (gol, oc, vic); Hwy 183/77A 0.8 mi N of Little Sarco Creek, 6080 (oc, vic); and Refugio Co.: North Clarkson Pasture, Rooke Ranch, ca 2.5 mi NNW of Woodsboro, 7047 (rk).

*RHYNCHOSPORA CADUCA* Ell. occurs not only on the Aransas Refuge as reported by Jones but also in Refugio Co.: small marsh near Melon Creek, Red Well Pasture ca 2.5 mi SW of Willow Lake, Greta Ranch, 10592 (gol, MARY, NY, oc, TAES, vic, VT).

*RHYNCHOSPORA MICROCARPA* Baldw. ex Gray was reported as rare, from Aransas Co. only, by C&J. It also occurs inland in Refugio Co.: marsh near Melon Creek, 1 mi S of Hwy 774, Refugio, 5967 (gol, oc, vic).

LEMNACEAE: *WOLFFIELLA LINGULATA* (Hegelm.) Hegelm. was said to be reported from Texas by C&J and was cited from the Welder Refuge by Jones. It also occurs in Refugio Co.: oxbow lake, Lake Trap, Rooke Ranch, N of Aransas River, 7.5 mi SSW of Woodsboro, 8531 (gol, MARY, NY, oc, rk, vic, VT).

JUNCACEAE: *JUNCUS ACUMINATUS* Michx. is much more widespread in our region than suggested by Jones. It also occurs in Goliad Co.: FM 2441 at Sarco Creek, 5151 (gol, oc, vic), Bisset Ranch, Arroyocita Pasture, 6139 (MARY, VT); Refugio Co.: near Melon Creek 1 mi S of Rte. 774, 4589 (oc, vic); Greta Ranch, Rte. 77, 8.5 mi NE of Refugio, 4858 (gol, oc, vic); FM 2441 ca 3 mi NW of Woodsboro, 6741 (rk, VT), River Pasture, N side of Aransas River 7.5 mi SSW of Woodsboro, 6852 (TAES); and



Victoria Co.: near Coletto Creek 2 mi SW of Rte. 77, 8327 (MARY).

JUNCUS INTERIOR Wieg. was recorded for Goliad and San Patricio Co. by Jones but is also abundant in our region in Refugio Co.: Greta Ranch, Rte. 77 8.5 mi NE of Refugio, 4838 (oc, vic); 3.8 mi N of Mission River crossing along FM 2678, 5131 (oc); N side of Aransas River 1 mi E of Rte. 77, 6653 (rk, VT).

JUNCUS VALIDUS Cov. is less frequent than the two species above, and is also found inland in Goliad Co.: Rte. 183/77A 0.8 mi NW of Little Sarco Creek crossing, 6081 (TAES, vic); and Refugio Co.: near Melon Creek 1 mi S of Rte. 774, 5650 (oc, vic); Mission River flats at FM 2678, 5921 (gol, VT); 1.8 mi N of FM 2441, 1 mi W of Rte. 77, Woodsboro, 7219 (rk).

LILIACEAE: ALLIUM ELMENDORFII M. Ownbey is a Texas endemic reported by C&J from Bexar, Wilson, and Atacosa Co. and by Jones from Nueces and San Patricio Co. It also occurs in Refugio Co.: N side of Aransas River 0.4 mi SE of Rte. 77 crossing, 6608 (rk).

ALLIUM RUNYONII M. Ownbey is another South Texas endemic reported by C&J and Jones as extending north to Kleberg Co. The new records appear to represent its northern limit, in Goliad Co.: intersection of FM 2441 and Sarco Creek ca 8 mi S of Goliad, 8597 (oc, vic); and Refugio Co.: NW side Rte. 77 8.2 mi NE of Refugio, 8397 (gol, MARY, MO, NY, oc, TAES, vic, VT).

AMARYLLIDACEAE: HABRANTHUS TEXANUS (Herb.) Steud. = *H. tubispathus* (L'Her.) Traub. Holmes and Wells (1980) have presented evidence that our plant is the same as the South American Paraná basin disjunct. This is still another example of the remarkable affinity of these floras.

FAGACEAE: QUERCUS MACROCARPA Michx. is also found in Victoria Co.: along Coletto Creek 2 mi SW of Rte. 77, 6364 (oc, vic).

POLYGONACEAE: ERIOGONUM LONGIFOLIUM Nutt. is more widespread than indicated by Jones, and is also found in Goliad Co.: Clip-McNamara Ranch road ca 3 mi SW of Goliad, 5527 (gol, oc, vic); FM 2441 1.8 mi S of Rte. 183/77A, 5721 (oc); and Refugio Co.: North Clarkson Pasture, NE side of FM 2441 4.5 mi NW of Woodsboro, 7256 (VT).

RUMEX HASTATULUS Baldw. ex Ell. is widespread in Refugio and San Patricio Co., and is also found in Goliad Co.: FM 2441 at Sarco Creek, 4764 (oc, vic); River Ranch, Rte. 239 7 mi SE of Goliad, 4910 (oc, vic); and Victoria Co.: sand terrace S of Coletto Creek 2 mi SW of Rte. 77, 8322 (gol, rk).

RUMEX SPIRALIS Small is a South Texas endemic with its northern limit in Refugio Co.: banks of Mission River at FM 2678, 4942 (oc, vic); brackish marsh, FM 1360 1.3 mi SSE of Woodsboro, 6702 (rk); East Rogers Pasture, margin of Medio and Blanco Creeks ca 4 mi N of Woodsboro, 6756 (rk, vic).

AMARANTHACEAE: FROELICHIA GRACILIS (Hook.) Moq. was reported



from Kleberg and Jim Wells Co. by Jones, and is also found as a field weed in Refugio Co.: sorghum field between FM 2678 and Melon Creek ca 1.5 mi N of Mission River, 5982 (gol, oc, vic).

NYCTAGINACEAE: *MIRABILIS LINEARIS* (Pursh) Heimerl. also occurs in Refugio Co.: N terrace of Aransas River ca 2 mi NW of Rte. 77 crossing, 6090 (VT); North Clarkson Pasture, NE side FM 2441 4.5 mi NW of Woodsboro, 7253 (TAES); East Rogers Pasture 4 mi N of Woodsboro near the Mission River, 8045 (MARY, rk, VT).

AIZOACEAE: *GLINUS RADIATUS* (R. & P.) Rohrb. is also found in Refugio Co.: South Cranell Pasture, Rooke Ranch, 6 mi S of Woodsboro, 7171 (gol, oc, rk, vic).

PORTULACACEAE: *TALINUM PARVIFLORUM* Nutt. is also found in Refugio Co.: shortgrass prairie, Greta Ranch, ca 8 mi NE of Refugio, 5410 (oc, vic); N bank of Aransas River ca 2 mi W of Rte. 77 crossing, 6089 (gol, vic).

NYMPHAEACEAE: *NELUMBO PENTAPETALA* (Walt.) Fern. is occasional not only in Refugio Co. but also in oxbow lakes of the San Antonio River in Goliad Co. (unvouchered).

*NYMPHAEA MEXICANA* Zucc. is also found in Refugio Co.: McGuill Lake 1 mi W of FM 2678 ca 4.3 mi S of Rte. 774, 5335 (gol, oc, pf, vic); oxbow lake near ranchhouse, Rooke Ranch, N side of Aransas River 7 mi S of Woodsboro, 7519 (rk, TAES).

RANUNCULACEAE: *ANEMONE CAROLINIANA* Walt. also occurs in Refugio Co.: N terrace of Aransas River ca 8.5 mi SSW of Woodsboro, Rooke Ranch, 6507 (rk, VT).

BRASSICACEAE: *DRABA CUNEIFOLIA* Torr. & Gray also occurs in Goliad Co.: caliche hill 1.8 mi SW of San Antonio River, Rte. 59, 4616 (oc); 0.6 mi N of Little Sarco Creek along Rte. 183/77A, 6582 (vic); and Refugio Co.: sandy hill, N terrace of Aransas River ca 8.5 mi SSW of Woodsboro, Rooke Ranch, 6505 (rk).

*LESQUERELLA GRANDIFLORA* (Hook.) Wats. is a Texas endemic which seems to reach its northern limit in our area, known also from Goliad Co.: W side Rte. 183/77A 0.6 mi N of Little Sarco Creek crossing, 6586 (oc); and Victoria Co.: sandy terrace S of Coletto Creek 2 mi SW of Rte. 77, 8339 (gol, MARY, NY, oc, rk, vic, VT).

*RORIPPA ISLANDICA* (Oeder) Borbas was said to be found only at Lake Corpus Christi by Jones. It is also found in Goliad Co.: San Antonio River banks, River Ranch, ca 7.5 mi SE of Goliad, 6109 (VT); and Refugio Co.: pond edge, SE corner of Barn Pasture, Rooke Ranch, 1.8 mi N of Woodsboro, 7752 (rk).

DROSERACEAE: *DROSER A ANNUA* E. L. Reed is also known from Goliad Co.: sandy terrace of Sarco Creek, FM 2441 8.5 mi S of Goliad, 8586 (gol, MARY, NY, oc, TAES, vic, VT).

SAXIFRAGACEAE: *LEPUROPETALON SPATHULATUM* (Muhl.) Ell. is also



occasional in Goliad Co.: W side Rte. 183/77A 0.6 mi N of Little Sarco Creek, 6585 (gol, vic); and Refugio Co.: 0.5 mi E of FM 2678, 0.5 mi S of Rte. 774, 4588 (oc); Aransas River terrace 1 mi E of Rte. 77, 8.5 mi SW of Woodsboro, 8219 (rk).

ROSACEAE: *PRUNUS TEXANA* Dietr. This Texas endemic is also found in Goliad Co.: Cadena Creek terrace at Rte. 239, 5867 (oc); and Refugio Co.: 1.5 mi N of FM 2441 ca 3.5 mi NW of Woodsboro, 6737 (rk); near Melon Creek, Red Well Pasture, ca 7 mi NE of Refugio, 10591 (NY, TAES, VT).

LEGUMINOSAE: *ACACIA HIRTA* T. & G. is the generally accepted name for *A. angustissima* var. *hirta* (T. & G.) Robins.

*CAESALPINIA DRUMMONDII* (T. & G.) Fisher is a rare species of Gulf Coastal Texas and adjacent Mexico previously known in Texas from Atascosa, Bee, Goliad, Karnes, and San Patricio Co. (C&J, Jones). It also occurs in brushland in Refugio Co.: N side of Aransas River, O'Connor Ranch, ca 9 mi WSW of Woodsboro, 6085 (gol, oc, vic); N side of Aransas River 1 mi E of Rte. 77 crossing, 6661 (rk); 2 mi S of Woodsboro, E side Rte. 77, 6917 (rk).

*CALLIANDRA CONFERTA* Gray is also found in Goliad Co.: caliche hills along Rte. 59 ca 2.1 mi SW of San Antonio River, 5905 (gol, oc, vic).

*CASSIA BAUHINIOIDES* Gray, while rare, is found at its eastern range limit in Goliad Co.: caliche hills along Rte. 59 2.1 mi SW of San Antonio River, 5896 (oc).

*CASSIA OCCIDENTALIS* L. is also found inland in Refugio Co.: pasture weed, Rooke Ranch, 0.5 mi W of Rte. 77 1.8 mi N of Woodsboro, 8065 (gol, oc, rk, vic, VT).

*COURSETIA AXILLARIS* Coult. & Rose is a rare species known previously in Texas only from Duval, Hidalgo, Jim Hogg, and San Patricio Co. It also occurs in a small population at its northeastern limit of range in Refugio Co.: South Tallow pasture, Rooke Ranch, slope at N side of Aransas River at power lines, 6.6 mi S of Woodsboro, 7629 (gol, oc, rk, vic).

*DALEA AUREA* Nutt. was said to occur in Bee and Jim Wells Co. by Jones. It also occurs in Goliad Co.: caliche hill along Rte. 59 2.1 mi SW of San Antonio River, 5739 (oc, vic); Refugio Co.: N bank of Aransas River at Recinda Bend, ca 8.5 mi SW of Woodsboro, 7286 (rk); and San Patricio Co.: Aransas River terrace ca 5.5 mi NE of St. Paul, 5785 (gol).

*DESMANTHUS ILLINOENSIS* (Michx.) MacM. also occurs at one locality in Refugio Co.: along shell road, Rte. 35 1.7 mi N of Tivoli, 10552 (GH, gol, MARY, MO, NY, oc, TAES, vic, VT).

*GALACTIA HETEROPHYLLA* Gray is a Texas endemic that reaches its eastern limit of range in Goliad Co.: caliche hills N of Rte. 59 2.1 mi SW of San Antonio River, 8619 (gol, MARY, oc, vic, VT).

*LATHYRUS PUSILLUS* Ell. is a rather generally distributed, but infrequent species also occurring in Refugio Co.: Greta Ranch, Rte. 77 ca 8.5 mi NE



of Refugio, 4884 (gol); Packery Flats along the Mission River at FM 2678, 4943 (oc, vic); and in Victoria Co.: near Fleming Prairie Road 1.9 mi SW of Rte. 77 near Coletto Creek, 8293 (gol, oc, rk, vic).

*MEDICAGO LUPULINA* L. is a more frequent and generally distributed introduced species than indicated by Jones. It also occurs in Goliad Co.: caliche hill along Rte. 59 1.2 mi NE of FM 1351, 5051 (gol, oc, vic); FM 2441 at Sarco Creek crossing, 5142 (gol, oc, vic); and Refugio Co.: N side of Aransas River near Rte. 77, 7081 (MARY, rk); 0.4 mi W of Rte. 77, 1.8 mi N of FM 2441, 8552 (rk).

*MEDICAGO ORBICULARIS* (L.) Bartal. also persists from cultivation but is much less frequent than the last. It also occurs in Refugio Co.: 0.5 mi S of Woodsboro at E side of Rte 77, 6690 (rk).

*PETALOSTEMON MICROPHYLLUM* (T. & G.) Heller also occurs in Refugio Co.: N terrace of Aransas River at Rte. 77, 7681 (gol, oc, rk, vic).

*PITHECELLOBIUM FLEXICAULE* (Benth.) Coult., according to C&J, ranges as far north as Sinton, San Patricio Co. Apparently, its northern limit is actually in Refugio Co.: caliche slope in Lake Trap, Rooke Ranch, ca 7.5 mi SSW of Woodsboro, 6828 (rk).

*SESBANIA VESICARIA* (Jacq.) Ell. is locally frequent in other portions of Refugio Co. besides those listed in Jones, and is also in Goliad Co.: Clip Ranch road near Melo Ranch, ca 3 mi SW of Goliad, 6184 (oc).

*STROPHOSTYLES LEIOSPERMA* (T. & G.) Piper is also found inland in Goliad Co.: River Ranch near San Antonio River ca 7 mi SE of Goliad, Rte. 239, 6094 (gol, oc, vic); prairie 1 mi N of Little Sarco Creek, W side of Rte. 183/77A, 6440 (TAES); and Refugio Co.: Greta Ranch, sandy prairie ca 2 mi N of Hwy 77 and 8.5 mi NE of Refugio, 10539 (MARY).

*STYLOSANTHES VISCOSA* Sw. is also found inland in Goliad Co.: Rte. 239 at Cadena Creek, 5582 (oc); W side of Rte. 183/77A 0.8 mi N of Little Sarco Creek crossing, 6074 (gol, oc, vic); and Refugio Co.: North Clarkson Pasture, Rooke Ranch, E side FM 2441, 4.4 mi NW of Woodsboro, 7863 (gol, rk, TAES, vic, VT).

*TEPHROSIA ONOBRYCHOIDES* Nutt. is also found inland in Refugio Co.: Greta Ranch, ca 8.5 mi NE of Refugio along Rte. 77, 5404 (gol, oc, vic).

GERANIACEAE: An obvious difference, not yet noted in any published key, between *Geranium carolinianum* and *G. texense* is that the former has 10 stamens and the latter has 5.

MALPIGHIACEAE: *ASPICARPA HYSSOPIFOLIA* Gray apparently reaches its eastern limit in Goliad Co.: caliche hills at N side of Hwy 59, 2.1 mi SW of San Antonio River, 5744 (pf, VT).

*THRYALLIS ANGUSTIFOLIA* (Benth.) O. Ktze. also reaches its eastern limit in Goliad Co.: caliche hills at N side of Rte. 59, 2.1 mi SW of San Antonio River, 5462 (ENCB, gol, oc, vic); and in Refugio Co.: caliche hill, Lake Trap, Rooke Ranch ca 7.5 mi SSW of Woodsboro, 7353 (gol, oc, vic).

RUTACEAE: *THAMNOSMA TEXANA* (Torr.) Gray also occurs in Goliad



Co.: caliche hills near McNamara ranchhouse, 2.8 mi SW of Goliad, 5562 (gol, oc, vic); caliche hills at N side of Rte. 59 2.5 mi SW of San Antonio River, 6490 (gol, oc, vic).

POLYGALACEAE: *POLYGALA ALBA* Nutt. is frequent in the eastern portion of our range as well, not only in Refugio Co., but also in Goliad Co.: McNamara ranch road near FM 2441, 2.8 mi SW of Goliad, 5061 (BM, gol, oc, vic); caliche hills at N side of Rte. 59 2.5 mi SW of San Antonio River, 5475 (NO).

*POLYGALA GLANDULOSA* HBK. apparently reaches its northeastern limit in Goliad Co.: caliche hills at N side of Rte. 59, 2.5 mi SW of San Antonio River, 5737 (oc, vic).

*POLYGALA INCARNATA* L. is also found inland in Goliad Co.: sandy post oak woods 0.6 mi W of FM 2441, Goliad, 5522 (gol, oc, vic); and in San Patricio Co.: Aransas River terrace, ca 5.5 mi NE of St. Paul, 5801 (oc).

*POLYGALA VERTICILLATA* L. is also found in Goliad Co.: Rte. 183/77A near Little Sarco Creek crossing, 5543 (NY, pf); and in Refugio Co.: Greta Ranch, N of Rte. 77 ca 8.5 mi NE of Refugio, 5398 (gol, oc, vic).

EUPHORBIACEAE: *ACALYPHA OSTRYIFOLIA* Ridd. is also found as a weed in Goliad Co.: Clip Ranch, 7.3 mi SW of intersection of FM 2441 and Rte. 183/77A, 5809 (gol, oc, vic).

*BERNARDIA MYRICIFOLIA* (Scheele) Wats. reaches its eastern limit of range in Goliad Co.: caliche hills N of Rte. 59 2.5 mi SW of San Antonio River, 5059 (TAES, VT).

*CROTON ARGYRANTHEMUS* Michx. is also found inland in Goliad Co.: FM 2441 6.5 mi S of Rte. 183/77A near Sarco Creek, 5159 (gol, VT); FM 2441, 1.8 mi S of Rte. 183/77A, 5710 (oc, vic).

*EUPHORBIA CORDIFOLIA* Ell. is also found inland on sands in Goliad Co.: bank of Little Sarco Creek at Rte. 183/77a, 5541 (gol, oc, vic); FM 2441 near Sarco Creek, 6424 (gol, oc, vic); and in Refugio Co.: N terrace of Aransas River just E of Rte. 77, 7684 (BM, rk, TAES, VT).

*EUPHORBIA COROLLATA* L., reported only for Refugio Co. by Jones, is also rarely found in Goliad Co.: ranch road 0.7 mi NE of McNamara ranchhouse, 2.8 mi SW of Goliad, post oak area, 6310 (oc).

*JATROPHA CATHARTICA* Teran. & Berl. apparently reaches its northern range limit in Refugio Co.: rare in scrub pasture, FM 2678 3.8 mi N of the Mission River crossing, 5673 (oc).

*TRAGIA RAMOSA* Torr. is also found in Goliad Co.: caliche hills N of Rte. 59, 2.5 mi SW of San Antonio River crossing, 5014 (gol).

AQUIFOLIACEAE: *ILEX VOMITORIA* Ait. is also frequent inland in oak mottes in the E portion of the coastal bend, particularly in Refugio Co.

SAPINDACEAE: *UNGNADIA SPECIOSA* Endl. is also present along the San Antonio River in Goliad Co.: Rte. 59 crossing, 8192 (gol, MARY, NY oc, TAES, vic, VT).

MALVACEAE: In my recent supplement (Hill, 1981) I neglected to indi-



cate the name change for *Abutilon lignosum* (Cav.) D. Don to *A. berlandieri* Wats. for our plants. Also, a printing error was made in the name *Sida abutifolia* Miller (= *S. filicaulis* Torr. & Gray).

HYPERICACEAE: ASCYRUM HYPERICOIDES L. is also found inland in sandy oak mottes in Refugio Co.: Greta Ranch, Rte. 77 ca 8.1 mi NE of Refugio, 6042 (oc, vic); Rte. 77, 1.8 mi N of FM 2441, Woodsboro, 8002 (oc, rk, vic).

HYPERICUM DRUMMONDII (Grev. & Hook.) Torr. & Gray is also in Goliad Co.: Rte. 183/77A 0.8 mi N of Little Sarco Creek crossing, 6069 (gol, oc, vic); Rte. 59 0.7 mi SW of San Antonio River crossing, 6460b (vic); and in Refugio Co.: Aransas River terrace 1 mi E of Rte. 77, 7724 (gol, rk, VT).

HYPERICUM GENTIANOIDES (L.) BSP. is also rarely found inland in sandy post oak woodlands in Goliad Co.: Bisset Ranch ca 4 mi W of Goliad between FM 2441 and Clip Ranch road, 6136 (oc, vic).

CISTACEAE: HELIANTHEMUM ROSMARINIFOLIUM Pursh was reported by Jones from San Patricio Co. only. It also occurs in Refugio Co.: Greta Ranch N of Rte. 77, 8.1 mi NE of Refugio, 5399 (oc); S side of Sous Creek, ca 6 mi S of Woodsboro, 8517 (gol, MARY, NY, oc, rk, TAES, vic, VT).

VIOLACEAE: VIOLA MISSOURIENSIS Greene is also found in Refugio Co. at the headwaters of the Mission River at Medio and Blanco Creeks ca 4.7 mi N of Woodsboro, 6552 (rk).

PASSIFLORACEAE: PASSIFLORA INCARNATA L. is locally frequent as well in live oak mottes in Refugio Co. at the Greta Ranch, N side of Rte. 77 8.1 mi NE of Refugio, 10685 (GH, gol, MARY, MO, NY, oc, TAES, vic, VT).

PASSIFLORA TENUILOBA Engelm. is also rarely found in Goliad Co.: caliche hills N of Rte. 59 2.5 mi SW of San Antonio River, 5899 (oc).

CACTACEAE: MAMMILLARIA LONGIMAMMA DC. is apparently found at its eastern range limit in Refugio Co. on caliche slopes, N bluff of Aransas River ca 7.5 mi SW of Woodsboro; a living plant was collected and can serve as a voucher (rk).

ONAGRACEAE: LUDWIGIA OCTOVALVIS (Jacq.) Raven is also found in Victoria Co.: along Coletto Creek 2 mi W of Rte. 77, 6367 (gol, oc, vic).

APIACEAE: HYDROCOTYLE UMBELLATA L. also occurs in Refugio Co.: Medio Creek at juncture with Blanco Creek ca 4.5 mi N of Woodsboro, 6768 (rk).

SANICULA CANADENSIS L. is also found in Goliad Co.: at San Antonio River crossing at Rte. 59, 5735 (NY, TAES) as well as in oak mottes in several locations in Refugio Co.

SPERMOLEPIS DIVARICATA (Walt.) Raf. is also rather frequent in Goliad Co.: caliche hill at N side of Rte. 59, 2.5 mi SW of San Antonio River crossing, 5019 (gol, oc, vic); N side of FM 2441 at Sarco Creek, 8587 (NY, VT); and in Victoria Co.: sandy terrace of Coletto Creek 2 mi SW of Rte.



77, 8338 (MARY, NY, VT).

OLEACEAE: *FORESTIERA ACUMINATA* (Michx.) Poir., while scarce, is also found in Victoria Co.: Coletto Creek bottomland 2 mi W of Rte. 77, 8361 (gol, oc, vic).

APOCYNACEAE: *AMSONIA ILLUSTRIS* Woods., already reported from Refugio Co. by Jones, is a locally common plant on open prairies of the Greta Ranch as well in the county ca 8.1 mi NE of Refugio, 10507 (gol, vic, VT).

ASCLEPIADACEAE: *ASCLEPIAS VIRIDIFLORA* Raf. also occurs in Goliad Co.: Rte. 59 0.7 mi SW of San Antonio River, 5493 (gol, oc, vic); terrace of Cadena Creek 0.6 mi E of Rte. 239, 5891 (oc); and is more widespread in Refugio Co. than indicated by Jones.

*MATELEA GONOCARPA* (Walt.) Shinnery is also found in the Mission River bottoms S of Refugio, 5687 (gol, oc, vic).

CONVOLVULACEAE: *CRESSA DEPRESSA* Goodd. also occurs in Refugio Co.: alkaline flats along Melon Creek ca 1 mi S of Rte. 774, 4986 (oc, vic).

*CUSCUTA GLABRIOR* (Engelm.) Yuncker also occurs in Refugio Co.: pasture 3.8 mi N of Mission River crossing along FM 2678, 5125 (gol, oc, vic); Greta Ranch, prairie N of Rte. 77, 8.1 mi NE of Refugio, 5411 (oc, vic).

*CUSCUTA INDECORA* Choisy also occurs in Refugio Co.: frequent in salt marsh at FM 2678 and the Mission River, 5109 (TAES, VT); Devil's Run 1.5 mi S of Woodsboro along Rte. 77, 7749 (rk).

HYDROPHYLLACEAE: *NAMA STENOCARPUM* Gray is rare in Refugio Co.: margin of pond in Barn Pasture, 1.8 mi N of Woodsboro, 7221 (gol, oc, rk, vic).

BORAGINACEAE: *HELIOTROPIUM INDICUM* L. also occurs in Goliad Co.: bank of San Antonio River NE of Rte. 239, ca 7 mi SE of Goliad, 6254 (gol, oc, vic, VT).

*HELIOTROPIUM TENELLUM* (Nutt.) Torr. also occurs in Refugio Co.: dry ridge along Rte. 774 at Dry Creek, Refugio town line, 5705 (gol); N side of Devil's Run 1.5 mi S of Woodsboro, 7574 (gol, rk); S side of Sous Creek, Rte 77 6 mi S of Woodsboro, 8524 (MARY, oc, rk, vic).

*MYOSOTIS MACROSPERMA* Engelm. also occurs in Victoria Co.: Coletto Creek bottomland 2 mi W of Rte. 77, 8359 (gol, MARY, NY, oc, TAES, vic, VT).

VERBENACEAE: *CALLICARPA AMERICANA* L., while said by Jones to be primarily coastal, is quite frequent as well in the understory of live oak mottes throughout eastern San Patricio Co., Refugio Co., and eastward. Vouchers include: Refugio Co.: Greta Ranch, 8.1 mi NE of Refugio, Rte. 77, 5396 (oc, vic); and San Patricio Co.: 5 mi NE of St. Paul, SW side of Aransas River, 5840 (gol, VT).

*PHYLA STRIGULOSA* (Mart. & Gal.) Moldenke is frequently misspelled, as in Jones, as '*P. strigillosa*'.



*VERBENA BRASILIENSIS* Vell., an introduced weed recorded only from Nueces Co. by Jones, also occurs in Refugio Co.: E side FM 2678 ca 4 mi S of Rte. 774, 5977 (gol, oc, vic).

**LAMIACEAE:** *MICROMERIA BROWNEI* (Sw.) Benth. var. *PILOSIUSCULA* Gray is also occasional in Refugio Co.: E bank Mission River in cordgrass marsh ca 4.5 mi S of Refugio, 5370 (gol, oc, vic); margin of Medio Creek at juncture with Blanco Creek, 4.5 mi N of Woodsboro, 6767 (rk).

*MONARDA FRUTICULOSA* Epling, a south Texas endemic, said to occur only in Brooks and Kleberg Co. by Jones also occurs in Goliad Co.: sandy terrace of Cadena Creek 0.1 mi E of Rte. 239, 5866 (oc); in Refugio Co.: N bank of Aransas River terrace 0.5 mi E of Rte. 77, 7522 (rk); and in San Patricio Co.: Aransas River terrace, S side, ca 5 mi NE of St. Paul, 5795 (gol, oc, vic).

**SOLANACEAE:** *SOLANUM CAMPECHIENSE* L. is a plant apparently restricted in our region to drying pond beds, reported only from San Patricio Co. by Jones. It also occurs at its northern range limit in Refugio Co.: N side of Aransas River, dry pond, Rooke Ranch, 7 mi S of Woodsboro, 7150 (gol, oc, rk, vic).

**SCROPHULARIACEAE:** *AGALINIS FASCICULATA* (Ell.) Raf., while less frequent than the other species of the genus listed for our area, is also found in Refugio Co.: N side of Rte. 774 near intersection with FM 2678, 6179 (oc, vic).

*BUCHNERA FLORIDANA* Gand. is also occasionally found inland in Goliad Co.: sandy prairie along Rte. 183/77A 0.8 mi N of Little Sarco Creek crossing, 6075 (gol, oc, vic); FM 2441 at N side of Sarco Creek ca 8 mi S of Goliad, 5596 (oc, vic); and in Refugio Co.: 1.8 mi NE of FM 2441 and 0.8 mi NW of Rte. 77, Woodsboro, 7215 (rk).

*LEUCOSPORA MULTIFIDA* (Michx.) Nutt. was reported only from San Patricio Co. by Jones, but it also occurs in Goliad Co.: banks of San Antonio River NE of Rte. 239 ca 7 mi SE of Goliad, 6264 (gol, oc, vic); and in Refugio Co.: at juncture of Blanco and Medio Creeks ca. 4.5 mi N of Woodsboro, 7764 (rk).

*VERONICA POLITA* Fries is an introduced weed reported to be present only in Nueces Co. by Jones. It also occurs in Goliad Co. (and probably elsewhere): roadside and yards, River Ranch, Hwy. 239 3.5 mi SE of Rte. 183/77A, 6588 (gol, oc, vic).

**ACANTHACEAE:** *SIPHONOGLOSSA GREGGII* Greenm. & Thomps. is a south Texas species that apparently reaches its northern range limit in Refugio Co.: caliche bluff at N side of Aransas River near clay pit, Rooke Ranch, ca 1 mi of Rte. 77, 7900 (gol, oc, rk, vic).

**RUBIACEAE:** *GALIUM TEXENSE* Gray is most frequent on the Edwards Plateau, but occurs infrequently in our area. In addition to the localities cited by Jones, there are populations in Goliad Co.: caliche hills along Rte. 59 1.8 mi SW of San Antonio River crossing, 5044 (oc, vic); pasture SE



of Clip Ranch road 2.8 mi SW of Goliad, 5576 (oc, vic); and in Refugio Co.: Rooke Ranch, pasture near Chocolate Swale ca 6 mi S of Woodsboro, 6972 (gol, rk).

*HEDYOTIS BOSCHII* DC. is a rather infrequent species, found locally inland in Refugio Co.: sandy margin of drying pond, Barn Pasture, 1.1 mi W of Rte. 77, 1.8 mi N of Woodsboro, 7222 (gol, oc, rk, vic).

*HEDYOTIS CROFTIAE* (Britt. & Rusby) Shinnery is a south Texas endemic that apparently reaches its northern range limit in Refugio Co.: sandy hill in East Rogers Pasture 4.5 mi N of Woodsboro, 6781 (oc, rk).

*RICHARDIA BRASILIENSIS* Gomes is fairly frequent in Refugio Co. (its occurrence there noted by Jones) and is also found in Goliad Co.: E side of Rte. 183/77A near Little Sarco Creek crossing, 5542 (pf, VT); and San Patricio Co.: S bank of Aransas River ca 5.5 mi NE of St. Paul, 5778 (gol, oc, vic).

**CAPRIFOLIACEAE:** *LONICERA JAPONICA* Thunb. is a noxious weed also established in roadside thickets in Goliad Co.: Rte. 59 at Rte. 239 intersection, Goliad, 7063 (gol, oc, vic).

**CUCURBITACEAE:** *CUCURBITA TEXANA* Gray, a rather rare Texas endemic, is cited from San Patricio Co. by Jones. It also occurs in Goliad Co.: San Antonio River bottomland 2 mi N of River Ranch headquarters ca 7 mi SE of Goliad, 6111 (gol, oc, vic); and Refugio Co.: North Clarkson Pasture, near Medio Creek 2 mi N of FM 2441 ca 3.5 mi N of Woodsboro, *s.n.* (MARY). Within San Patricio Co. it also occurs along Aransas River 5 mi NE of St. Paul, 5847 (gol, oc, vic).

**CAMPANULACEAE:** *TRIODANIS COLORADOENSIS* (Buckl.) McVaugh is a rare species said to be endemic to the Edwards Plateau of Texas by C&J. Jones reported it from near Orange Grove, Jim Wells Co. It also occurs in Goliad Co.: caliche hills along Rte. 59 1.2 mi NE of FM 1351, 5057 (gol, oc, pf, vic).

**ASTERACEAE:** *APHANOSTEPHUS KIDDERI* Blake also occurs to the east of the localities cited by Jones in Refugio Co.: sandy terrace at N end of Packery Flats, W side FM 2678 near Mission River, 5948 (oc); caliche hill 1 mi E of Rte. 77, 8.5 mi SW of Woodsboro, 8436 (gol, oc, rk, vic).

*ARTEMISIA GLAUCA* Pall. was cited from San Patricio Co. by Jones. It also occurs in Refugio Co.: N terrace of Aransas River 1 mi E of Rte. 77, 7962 (OSU, rk, TAES).

*ASTER PATENS* Ait. was reported by Jones from Refugio Co.; it also occurs in Goliad Co.: caliche hills just W of McNamara Ranch headquarters, 2.8 mi SW of Goliad, 6328 (oc, vic).

*CROPTILON DIVARICATUM* (Nutt.) Raf. var. *HOOKERIANUM* (T. & G.) Shinnery is also found in Goliad Co.: post oak savannah 1.7 mi SW of McNamara Ranch headquarters along ranch road, 4.5 mi SW of Goliad, 6127 (gol, oc, vic).

*DRACOPIS AMPLEXICAULIS* (Vahl) Cass. may be introduced in our area,



and also occurs in Refugio Co.: along ranch road, blackland prairie, Greta Ranch 2 mi NW of Rte. 77, 8.1 mi NE of Refugio, 8407 (oc, vic); and in Victoria Co.: roadside at intersection of Rte. 77 and Rte. 59 2.2 mi W of Victoria, 8420 (gol, MARY, MO, NY, oc, TAES, vic, VT).

*ERIGERON MYRIONACTIS* Small is also found inland in Refugio Co.: Greta Ranch entrance, Rte. 77 8.5 mi NE of Refugio, 4848 (oc, pf, vic); sandy pasture along Kelly Rd. ca 4.5 mi N of Woodsboro, 6785 (rk); caliche gullies, Lake Trap, Rooke Ranch ca 7.5 mi SW of Woodsboro, 6790 (rk); Recinda Bend of Aransas River, N terrace, ca 8.5 mi S of Woodsboro, 7285 (gol); pasture S of Sous Creek, ca 6 mi S of Woodsboro, Rte. 77, 8525 (oc).

*ERIGERON PHILADELPHICUS* L. was said by Jones to occur only in Refugio Co.; it also occurs in Goliad Co.: banks of San Antonio River 0.5 mi SW of Rte. 59 crossing, 8194 (gol, MARY, oc, vic, VT); and Victoria Co.: Coletto Creek bottomland 2 mi W of Rte. 77, 8360 (gol, MARY, oc, vic).

*ERIGERON TENUIS* Torr. & Gray is frequent in our area, known also from Victoria Co.: sandy terrace S of Coletto Creek, 2 mi W of Rte. 77, 8326 (gol, MARY, oc, vic, VT).

*EUPATORIUM GLAUCESCENS* Ell. is also found, though rarely, inland on the sandy terraces of Pleistocene age in Goliad Co.: W side of Rte. 183/77A 0.9 mi NW of Little Sarco Creek crossing, 6457 (oc, TEX).

*GRINDELIA OOLEPIS* Blake is a rare and rather local south Texas endemic whose distribution has been discussed by Mahler (1981). A new county record would be that found in Refugio Co.: along ranch road to building complex, Rooke Ranch, Ranch Traps, ca 6 mi S of Woodsboro, 7994 (gol, oc, rk, TAES, vic, VT).

*GYMNOSPERMA GLUTINOSUM* (Spreng.) Less. apparently reaches its eastern range limit in our area in Goliad Co.: caliche hills N of Rte. 59, 2.5 mi SW of San Antonio River crossing, 6278 (gol, oc, vic).

*HETEROTHECA (CHRYSOPSIS) PILOSA* (Nutt.) Shinnery is also rather frequent inland on sandy terraces in Goliad Co.: along Cadena Creek at Rte. 239, 5589 (oc); W side of Rte. 183/77A 0.8 mi N of Little Sarco Creek crossing, 6073 (gol, oc, vic).

*HYMENOXYIS SCAPOSA* (DC.) Parker also occurs on the caliche hills in Goliad Co.: N of Rte. 59 2.1 mi SW of San Antonio River crossing, 5738 (oc); in Refugio Co.: sandy terrace in North Clarkson Pasture ca 4.5 mi NW of Woodsboro, Rooke Ranch, 6746 (rk); and San Patricio Co.: Aransas River terrace ca 5 mi NE of St. Paul, 4742 (gol, oc, vic).

*KRIGIA OPPOSITIFOLIA* Raf. was cited from Refugio and San Patricio Co. by Jones. It is also fairly frequent in Goliad Co.: sandy terrace of Sarco Creek at FM 2441 crossing 8.5 mi S of Goliad, 4752 (gol); and Victoria Co.: south terrace of Coletto Creek 2 mi W of Rte. 77, 8310 (gol, oc, rk, vic).

*LIATRIS ACIDOTA* Engelm. & Gray was, according to Jones, found only NE of Rockport. I have also located a population inland in Goliad Co.: sandy



terrace along Little Sarco Creek 0.9 mi NW of Rte. 183/77A crossing, 6456 (oc, vic).

*MACHAERANTHERA TENUIS* (Wats.) Turner & Horne is an unusual disjunct in our area, being more frequent in Jeff Davis Co. in West Texas and in Mexico (C&J). Jones recorded it from Kleberg and San Patricio Co. It is also rather frequent in Refugio Co.: W terrace of Melon Creek ca 1 mi S of Rte. 774, 6206 (oc, VT); clay ridges near Fennessey Marsh 1.5 mi NW of Mission River crossing and FM 2678, 6418 (gol, oc, TEX, vic); Lake Trap, Rooke Ranch ca 7.5 mi SSW of Woodsboro, 7731 (gol, pf, rk, TAES, vic, VT); 0.5 mi N of FM 2441 in North Clarkson Pasture of Rooke Ranch 4.5 mi NW of Woodsboro, 7853 (rk).

*PLUCHEA ODORATA* (L.) Cass. is the name for *P. purpurascens* (Sw.) DC. as interpreted by C&J and Jones.

*THELESPERMA AMBIGUUM* Gray is also rarely found in Goliad Co.: caliche hill just S of San Antonio River 1 mi NE of McNamara Ranch headquarters, 1.8 mi SW of Goliad, 5914 (oc).

*VERBESINA MICROPTERA* DC. was recently reviewed by Olsen (1979). My earlier remarks (1981) that it should be considered synonymous with *V. virginica* to which it is closely related should be viewed in light of Olsen's interesting evidence to the contrary. It seems that *V. microptera* is, indeed, a good species showing geographic isolation as well as morphological differences.

*VERNONIA TEXANA* (Gray) Small was said to occur only in Refugio Co. by Jones. It also occurs in Goliad Co.: 0.8 mi NW of Rte. 183/77A crossing over Little Sarco Creek, 6072 (gol, oc, vic).

#### ACKNOWLEDGEMENTS

I would like to thank the O'Connor and Rooke families of Victoria and Woodsboro, Texas, respectively, for allowing access to their property and for helping to fund this study. I would also like to thank Fred B. Jones for his interest, suggestions, and support and the Maryland Agricultural Experiment Station for its generous support for studies on our declining flora both within and outside of Maryland. This is Scientific Article No. A-3111, Contribution No. 6177 of the Maryland Agricultural Experiment Station.

#### REFERENCES

- CORRELL, D. S. and M. C. JOHNSTON. 1970. Manual of the vascular plants of Texas. Texas Research Foundation. Renner, Texas.
- GOULD, F. W. 1962. Texas Plants—a checklist and ecological summary. Tex. Agr. Exp. Sta. MP-585.
- GOULD, F. W. 1975. The grasses of Texas. Texas A&M University Press, College Station.
- GOULD, F. W. and T. W. BOX. 1965. Grasses of the Texas Coastal Bend. Texas A&M University Press, College Station.
- HILL, S. R. 1981. Supplement to *Flora of the Texas Coastal Bend* by F. B. Jones. Sida 9: 43–54.



- HILL, S. R. 1982. Monograph of the genus *Malvastrum* A. Gray (Malvaceae: Malveae). *Rhodora* 84: 1-83.
- HOLMES, W. C. and C. J. WELLS. 1980. The distribution of *Habranthus tubispathus* (L'Her.) Traub in South America and North America—Texas and Louisiana. *Sida* 8: 328-333.
- IRVING, K. S. 1980. The systematics of *Hedeoma* (Labiatae). *Sida* 8: 218-295.
- JONES, F. B. 1977. Flora of the Texas coastal bend. Second Edition. Welder Wildlife Foundation Contr. B-6. Corpus Christi, Texas.
- KRAL, R. 1971. A treatment of *Abilgaardia*, *Bulbostylis*, and *Fimbristylis* (Cyperaceae) for North America. *Sida* 4: 57-227.
- KRAL, R. 1978. A synopsis of *Fuirena* (Cyperaceae) for the Americas north of South America. *Sida* 7: 309-354.
- MAHLER, W. F. 1981. Notes on rare Texas and Oklahoma plants. *Sida* 9: 76-86.
- OLSEN, J. 1979. Taxonomy of the *Verbesina virginica* complex (Asteraceae). *Sida* 8: 128-134.